

CLAIMS

1. A method for producing a tubular component (10-1) provided at each of its two ends with a threaded element comprising a male (13-1) or female (14-1) thread and a makeup stop abutment (15-1, 15-2) that can form part of a string of tubular components in which two consecutive components (10-2, 10-1) are mutually assembled by making up the male thread (13-2) of one threaded element of one component into the female thread (14-1) of one threaded element of the other component, the corresponding stop abutments (15-2, 16-1) coming into mutual bearing contact, the method comprising the following steps:

- a) mounting the component (10) in a chuck of a lathe;
- b) machining a first threaded element at one end of the component using the lathe;
- c) revolving the component in the lathe chuck; and
- d) machining a second threaded element at the other end of the component by means of the lathe, using a machining tool that is displaced with respect to the frame of the lathe under the control of a program, from a given position;

characterized in that:

- between steps b) and c):
 - e) a first orientation gauge is screwed onto the first threaded element, the gauge comprising a thread that matches that of the first threaded element and a makeup stop abutment and having a mark on its external periphery, to bring the stop abutments of the threaded element and the orientation gauge into mutual bearing contact;
 - f) an orientation mark axially aligned with the mark on the orientation gauge is drawn on the external periphery of the component;
- during step c), the component is so disposed that its orientation mark is located in the same angular position with respect to the chuck as in step f);
- during step d), the starting position of the tool is defined after at least one preliminary test in

which steps a), b), e), f), c) and d) are followed by the following steps:

- g) a second orientation gauge (2) comprising a thread matching that of the second threaded element and a makeup stop abutment and having a mark (4) on its external periphery is screwed onto the second threaded element to bring the stop abutments of the threaded element and the orientation gauge into mutual bearing contact;
- the orientation gauge used during step g) being the first orientation gauge if the threads of the first and second threaded elements are both male or both female, or being of a matching type to the first orientation gauge and having its mark axially aligned with the mark of the first orientation gauge when the first and second orientation gauges are screwed into abutment if one of the threaded elements is male and the other is female; and
- h) the angular offset between the marks (11, 4) on the component and the orientation gauge is compared with a pre-defined set value Q and the new starting position of the machining tool is defined as being axially offset with respect to the initial position by a quantity determined as a function of the direction and amplitude of any existing deviation.

2. A method according to claim 1, in which the axial offset of the starting position of the machining tool comprises a quantity:

$$C = P \times \frac{\alpha + Q}{2\pi}$$

- P being the thread pitch and α being the value of said deviation measured in radians.

3. A method according to claim 2, in which said quantity C is calculated using the formula:

$$C = \frac{P}{\pi} \times \left(\frac{B}{D} + \frac{Q}{2} \right)$$

- B being the length of the subtending circular arc on a peripheral surface of the component with diameter D, between the mark thereon and the axial half-plane con-

taining the mark of the orientation gauge, said arc having a value of α radians.

4. A method according to one of the preceding claims, in which the orientation mark of the component comprises a first elementary mark drawn in the axial alignment of the mark of the orientation gauge in the region of the first threaded element, and a second elementary mark then drawn in the same angular position as the first elementary mark in the region of the second threaded element.
5. A method according to one of the preceding claims, in which the first threaded element comprises a male thread.
6. A method according to one of the preceding claims, in which the tubular component comprises a great length pipe provided at each end with a male threaded element and a short coupling provided at each end with a female threaded element, a male threaded element being made up into position in a female threaded element of the coupling.
7. A method according to one of claims 1 to 5, in which the tubular component is a great length pipe provided at one end with a male threaded element and at the other end with a female threaded element.
8. A method according to one of claims 1 to 5, in which the two ends of the tubular component are provided with threaded elements of the same type.
9. A string formed from tubular components as can be obtained by the method defined in one of the preceding claims, in which two consecutive components (10-2, 10-1) are mutually assembled by making up the male thread (13-2) of one threaded element of one component into the female thread (14-1) of one threaded element of the other component, the corresponding stop abutments (15-2, 16-1) coming into mutual bearing contact, said components having respective orientation marks on their external periphery the angular offset of which does not exceed 10° between two consecutive components.

10. A tubular component (10-1) provided at its two ends with threaded elements comprising a male thread (13-1) and a female thread (14-1) respectively and respective makeup stop abutments (15-1, 16-1), as can be obtained
5 by the method defined in one of claims 1 to 8, having an orientation mark on its external periphery and in which said threaded elements are machined so that when its male thread is made up into the female thread of an identical tubular component by bringing the corresponding stop abutments into mutual bearing contact,
10 the angular offset between the orientation marks of the two components does not exceed 10° .
11. A tubular component according to claim 10, in which the angular offset between the transverse cross sections of the male and female threads (13-1, 14-1) in
15 radial planes (P1, P2) located at the same axial distance (L) from the abutments (15-1, 16-1) respectively associated therewith does not exceed 10° .
12. A string or tubular component according to one of
20 claims 9 to 11, in which said angular offset does not exceed 5° .